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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Isao Misu

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EXAMINER

SMITH, FRANCIS P

ART UNIT

PAPER NUMBER

1792

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/708,760	Applicant(s) MISU ET AL.	
	Examiner Francis P. Smith	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on February 20, 2008. These drawings are accepted.

Response to Arguments

2. The amendments to the specification and claims received on February 20, 2008 are accepted.
3. The cancellation of claims 1-16 and the addition of claims 17-38 are acknowledged.
4. The 35 USC 112, 2nd paragraph rejections have been withdrawn in response to Applicant's amendments to the claims and arguments.
5. Applicant's arguments with respect to claims 17-38 have been considered but are not convincing in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 28-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For claim 28, "rotating the predetermined area of said component and the supply member of the oil repellent supply apparatus relative to one another and rotating the predetermined area of said component **and** the removal member of the oil repellent removal apparatus relative to one another, at the same time" suggests that the predetermined area of the component, the supply member of the oil repellent supply apparatus, and the removal member of the removal apparatus are all rotating. In paragraph [0037], lines 6-10, the predetermined part is being rotated in one direction by a rotation driving apparatus. However, lines 1-5 of [0045] describe the removal apparatus only moving in an upward direction to form a recess portion between the shaft and the pedestal of the removal apparatus. Furthermore, lines 1-6 of [0038] disclose the supplying nozzles (i.e. supply apparatus) are driven vertically such that the supplying nozzles are arranged just above the surface of the shaft (e.g. predetermined area). Therefore, the instant application does not support the rotation of the predetermined area, supply member of the oil-repellent supply apparatus, or removal member of the removal apparatus relative to one another, at the same time.

Claims 29-38 are rejected for inheriting the deficiencies from the claim which they depend.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwamoto (JP 2001232289).

Iwamoto teaches applying an oil repellent agent to the bearing component of a hydrodynamic bearing. For claim 17, Iwamoto discloses supplying the oil repellent agent through a spreading head via supply pipes at equal intervals in a radial direction ([0017], lines 1-6). After the application of the solvent, the excess is discharged with an exhaust pipe (i.e. removing excess oil repellent from the predetermined area of said component with an oil repellent apparatus) ([0018], lines 9-13). Furthermore, the oil repellent can be shaken off, whereby it is automatically coated evenly on the heteromorphic inner diameter portion 5a of the bearing component (i.e. moving the predetermined area of said component and the supply member of the oil repellent supply apparatus relative to one another to thereby coat the predetermined area with the oil repellent [0017], lines 10-18).

For claims 18-21, Iwamoto teaches several modes of oil-repellent removal. Iwamoto discloses a removal member is juxtaposed with the predetermined area such that a discharge pathway is formed on the ring-shaped holding member. For instance, the bearing-component may be dismantled (i.e. relative movement of the predetermined

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area) from the coating heads by a worker (i.e. a removal means/apparatus) and shaken to automatically coat the bearing (i.e. coating the bearing with oil repellent solution and causing relative movement of the predetermined area while the excess is being removed). Furthermore, the excess is discharged via discharge pathway 17 (i.e. a juxtaposed removal member to remove excess oil repellent before diffusing out of a predetermined area) and is also removed when the oil-repellent substantially overflows the upper opening of the gap, and thus, removing the excess oil repellent solution as it is being supplied/applied, before solidification. Overall, Iwamoto as a whole teaches moving the predetermined area of said component and the removal member of the oil repellent removal apparatus relative to one another while the excess oil repellent is being removed and as the oil repellent is supplied, before the oil repellent solidifies, before the solution diffuses out of the predetermined area, and at the same time the oil repellent solution is being supplied to the predetermined area of said member with the oil repellent supply apparatus ([0015], lines 20-21; [0017], lines 1-18; [0018], lines 9-13).

For claim 22, Iwamoto teaches supplying the oil repellent solution through coating heads (i.e. nozzle) composed of a main body member with a columnar protruding portion which fits with the heteromorphic inner diameter portion of the aforesaid bearing component at a prescribed gap (i.e. supplying oil repellent through a nozzle directed towards and spaced from the predetermined area of said component) ([0009], lines 1-20).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto (JP 2001232289) in view of Jefferson et al. (US 6,056,822).

Iwamoto does not explicitly teach checking whether the nozzle is clogged or removing solidified material from the nozzle.

Jefferson teaches a process for continuously supplying a solution or suspension to a feed composition. Specifically, the system includes an automatic nozzle clean-out system to be applied when nozzles become clogged from solidified additives. An air clean-out line is connected to a plurality of nozzle cleaning devices such that, when subject to air, the nozzle cleaning device thrust a needle into the corresponding nozzle to remove the clogging (e.g. treating the nozzle to remove solidified material from the nozzle) (col. 7, lines 25-42). In addition, an audible or visible alarm is supplied for indicating that the nozzles have become clogged (analogous to checking whether the nozzle is clogged)(col. 7, lines 57-62). Iwamoto and Jefferson are analogous art because they are from the same problem solving area (e.g. coating a substrate). Therefore, it would have been obvious to one skilled in the art at the time of the invention to utilize Jefferson's automatic nozzle clean-out system in Iwamoto's method in order to keep the supply lines free from solidified material that will inevitably slow processing times.

12. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto (JP 2001232289) in view of Fujimoto et al. (US 2001/0025890 A1).

Iwamoto teaches discharging the excess oil-repelling agent by a discharge pathway, which is located in the ring-shaped holding member and is designed to fit the bearing component at a prescribed gap/recess (e.g. opening is complimentary to at

least a portion of the predetermined area of said component) (figs. 3 and 4, [0015], lines 1-21, [0018], lines 9-13), but does not expressly teach utilizing a suction.

Fujimoto teaches an apparatus and method for supplying a treatment solution. Specifically, a drain piping is included for draining the treatment solution filtered and a suction step for sucking the treatment solution from the container thereby discharging said solution ([0009]). Iwamoto and Fujimoto are analogous art because they are from the same problem solving area (e.g. supplying a treatment solution onto a substrate). Therefore, it would have been obvious to one skilled in the art at the time of the invention to utilize Fujimoto's suction feature in Iwamoto's method in order to rapidly remove excess solution, thereby reduce processing times.

13. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto (JP 2001232289) in view of Isayama et al. (US 4,050,078).

Iwamoto does not disclose supplying a solvent to remove solidified buildup.

Isayama teaches an automatic nozzle cleaning system for inkjet printers whereby a clogged nozzle will be recognized by an insufficient ink flow rate, triggering the ejection of a solvent to dissolve the deposit. The flow rate of the solvent is also detected and is terminated when the solvent flow rate is sufficient, indicating the removal of the blockage (see abstract). Iwamoto and Isayama are analogous art because they are from the same problem solving area (e.g. a deposition process coupled with clog prevention). Therefore, it would have been obvious to one skilled in the art at the time of the invention to utilize Isayama's automatic nozzle cleaning system in Iwamoto's

method in order to automatically remove a blockage without significantly hindering the overall process time.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis P. Smith whose telephone number is (571) 270-3717. The examiner can normally be reached on Monday through Thursday 7:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mikhail Kornakov can be reached on (571) 272-1303. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FPS

/Michael Cleveland/
Supervisory Patent Examiner, Art Unit 1792